@

BEST
PRACTICE
COMPENDIUM
IN
IMPLEMENTING
THE e-SEE
AGENDA +
2011

GLOSSARY

BiH	Bosnia and Herzegovina
CARNet	Croatian Academic Research Network
DKMS	Document and Knowledge Management System
DMS	Document Managing System
DTT	Digital Terrestrial Television
DVB-T	Digital Video Broadcasting - Terrestrial
EDMS	Electronic Document Management System
EDUBUNTU	Educational Linux-based operating system
EDUROAM	World-wide roaming access service for research and education
eSEE	Electronic South East Europe
eSEE Agenda	Cooperative effort to develop the Information Society in SEE
EU	European Union
FYROM	Former Yugoslav Republic of Macedonia
GEA	Gender Equality Agency
GEANT	Gigabit European Advanced Network Technology
GRNet	National Research and Education Network of Greece
GTZ	German Technical Cooperation
i2010	European Programme for Information Society for growth and employment
ICT	Information and Communication Technology
ID	Identification Document

IS	Information Society
ISP	Internet Service Provider
IXP	Internet Exchange Point
LAN	Local Area Network
LMS	Learning Management System
MDGs	Millennium Development Goals
NGO	Non-Governmental Organisation
NLC	National Licensing Center
PC	Personal Computer
SEE	South East Europe
SEEGRID	South East European Grid Enabled Infrastructure Development
SMS	Short Message Service
UN CEDAW	United Nations Convention on the Elimination of All Forms of Discrimination against Women
UNDP	United Nations Development Programme
UNMIK	United Nations Mission in Kosovo
VAT	Value-Added Tax

FOREWORD

Regional Cooperation Council, together with the UNDP, has been ardently promoting regional cooperation in the area of Information Society and encouraging the SEE countries on their path to European and Euro-Atlantic integrations. The efforts of the countries of the region are complementary to the RCC efforts to promote a long-term development vision for the Western Balkans, which complements the goals of the European Union's Europe 2020 strategy for smart, sustainable and inclusive growth.

The European Union's Lisbon Strategy, launched in 2000, explicitly recognized the new technologies' "potential for growth, employment and inclusion" and the contribution that ICTs can make to the stability, cohesion, and integration of the Union itself as it increasingly becomes an Information Society. This vision has been brought to practical realization through a series of special initiatives such as e-Europe 2002, e-Europe 2005, e-Europe +, i2010 and the Digital Agenda. In the current global political and economic context, the importance of ICTs for Information Society development must again be emphasized for the development, integration and stabilization of SEE region, whether internally, within the EU context, or globally. The e-SEE countries cannot afford to lag behind and indeed have proven their ability to rise to the challenge and press forward rapidly.

It is now nearly ten years since the region embarked on implementing a systematic strategy focused on broad ICT development. It comprises the electronic SEE Agenda+ to promote content and e-Governance, and the broadband SEE Action Plan to enhance the availability and lower the cost of broadband communications, stimulate an active public-private sector dialogue, and provide support to the region's e-Governance programs. This strategy is bearing fruit and having a positive impact on the region's ability to compete in the global marketplace.

Since its creation in 2002, the e-SEE Secretariat has kept a finger on the pulse of the SEE Information Society and supported a network of resource persons in each country working for the betterment of living standards and opportunities of the region's citizens, young and old, men and women, able bodied or disabled alike.

Through this Publication, the e-SEE Secretariat seeks to allow all of those involved in this mighty enterprise to become familiar with the achievements so far. The Publication showcases examples of increased effectiveness, better insight at the level of policy development, enhanced translation of regionally-agreed reforms to the national level, and the improved programming of the Instrument for Pre-accession Assistance (IPA) towards Europe 2020 goals.

It describes best practice in ICT for Development and e-Governance in the Regional Cooperation Council Flagship Initiative - Electronic South Eastern Europe Initiative - acknowledging achievements of South East European countries in promoting the development of Information Society. The projects showcased in this publication represent but a few of numerous successes in the region, demonstrating the considerable progress made on the goals of the electronic SEE Agenda+.

As we congratulate the e-SEE Initiative participants on their efforts and successes, we contemplate the years and new challenges ahead as the pace of ICT development in South East Europe picks up, and the enormous potential is realised as the region's governments and private sector work together to promote ICT. The timing of this publication is very appropriate in light of current efforts to give a renewed political impetus to ICT development in the region and the related process of implementing the e-SEE Agenda+.

Hido Biščević

Secretary General

Regional Cooperation Council

INTRODUCTION

Information and Communication Technologies (ICTs) in the context of governance have become instrumental in providing an "enabling environment" for the realization of the Millennium Development Goals (MDGs).[1] The EU has also positioned ICTs at the core of its priorities since the 2001 Lisbon agenda. ICT is a proven powerful instrument of accelerated development, democratic advancement and a driver of international cooperation. A quarter of EU GDP growth and 40% of productivity growth are already accounted for by ICTs and the increased regional cooperation generated by the eSEE initiative in Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Romania, Serbia and UNMIK/Kosovo cannot be underestimated. By devoting human and financial resources towards implementing the e-SEE Agenda+, e-SEE Initiative members have indeed clearly demonstrated their commitment to a coordinated an systematic process of development and stability.

This publication presents a number of 'best practices' related to ICT for development in South Eastern Europe. These projects have been chosen to show a great range in terms of creative technical or management solutions, budget-friendly options and context sensitive approaches. These underline the three salient aspects of the eSEE agenda+.

The first chapter on the single SEE information space presents innovative projects that integrate aspects of coordination across the region as well as interoperability. Albania's National Licensing center, The Former Yugoslav Republic of Macedonia's single windows for licensing and UNMIK/Kosovo's internet exchange point for SMEs direct stimulate efficient and fair business. The e-Archive Portal of the Ministry of Communications and Transport of Bosnia and Herzegovina the National registries of Moldova, the Health Information System of Montenegro, the Knowledge Based Economy of Romania and the Real Estate Cadastre And Registration project of Serbia provide efficient management solutions to government while increasing access to information to citizens.

The second chapter ″Innovation and investment in ICT research and education″ underlines the tremendous potential and the benefits reaped by projects that look to long term returns by building strong foundations for development. Albania has at an early stage tackled ICT in education and access in schools, a path Moldova has followed and on which UNMIK/Kosovo is about to embark, while Croatia has used IT solutions to connect isolated island schools to the

---

[1] http://www.undp.org/governance/mdgs.htm

national education system. The Former Yugoslav Republic of Macedonia has adopted a 'freeware' policy allowing widespread use of advanced technology in all schools. Montenegro and Romania have developed sophisticated platforms for supplementing the content of education curriculums around the country. Noteworthy are Bosnia and Herzegovina's creative initiative on the digitalization of cultural heritage and Serbia's network connectivity to major EU networks.

The third chapter on ˝Inclusive Information Society˝ showcases efforts in SEE to stimulate increase participation and access be it from businesses or citizens. Albania's public procurement platform, Moldova's barcode labelling for products and Croatia's eHealth initiative allow for greater transparency and fairer participation in business transactions thus stimulating a healthy business environment and increased competition on the market. Montenegro's Central Government Portal and Kosovo's municipality platforms aim at increasing transparency and citizens' trust in state institutions. Some projects tackling universal services such as Romanias's National Strategy, the National Gender Strategy of Bosnia and Herzegovina and the online courses offered to women in Serbia address the issues of participation of those with restricted access to new technologies. The Former Yugoslav Republic of Macedonia's Safe internet initiative tackles the consequences of the children's increased acces to the internet.

This publication comes as a complement to the evaluation research mission whose findings are published in *Going the Extra Mile for the Digital Agenda: E-Leadership efforts in SEE* . It will hopefully serve as inspiration for leaders in the development of ICTs in SEE.

1. eSEE Agenda for Single SEE Information Space

The first objective of the eSEE agenda+ is to establish a Single Information Space offering affordable and secure high-bandwidth communications, rich and diverse content and digital services. Action in this area combines regulatory and other instruments to create a modern, market-oriented framework for the digital economy.

ALBANIA
NATIONAL LICENSING CENTER

Based on a new law, which reforms business licensing in Albania, the National Licensing Center (NLC), a central public institution under the Ministry of Economy, Trade and Energy, opened its doors in June 2009.

The NLC is based on an IT system that automates the process of licensing and enables step-by-step tracking of the application progress making it easier for businesses to operate in Albania. The NLC's mission is to simplify the licensing, permit and authorization procedures and to support all public institutions in the decision making process in order to create a business friendly regulatory environment. Indeed, with its one-stop-shop services and shortened, transparent and fast procedures, the National Licensing Center reduces administrative barriers, cuts down costs related to the licensing process for businesses, and minimizes the level of informality, thus reducing corruption opportunities.

The NLC handles all the procedures related to licenses/permits/authorizations, title substitutions, changes and title revocations as established by the law; maintains and administers the National Registry of Licenses and Permits; ensures public access to the National Registry of Licenses and Permits in accordance with the law; informs and counsels the applicants and the public of the procedures to obtain a license, permit or authorization.

The new procedures for handling a request for a license or permit are simple, transparent, and make use of IT solutions. They are based on the one stop shop model through an integrated and electronic exchange of information and documents amongst public institutions. The ″Silent consent″ principle avoids delays and bureaucratic procedures

The integrated portal (www.qkl.gov.al) consists of three main functions:

● A procedural instrument

● Public information instrument (announces all approved and active titles)

● Archives

This project was funded by the Millennium Challenge Corporation (MCC), and administered by USAID.

The project did not only provide technical solutions for licensing. It also involved public outreach to explain licensing reforms to the public and promote the new National Business and provided grants to nongovernmental organizations to monitor licensing reforms. Preparation work for full digitalization lasted 3 years.

In December 2009 the NLC announced that it was expanding its one-stop-shop activities to regions and co-locating its offices with the National Registration Office increasing thus the integration of processes. Currently there are three joined service windows in Korce, Vlore and Shkoder with 6 more being launched during the month of May 2010. Starting from January 1st, 2010 the times for license and permits approvals was further reduced to an average of 10-15 days. Further populating the National Registry with information on licenses and permits issued by independent and other instructions are expected.

BOSNIA AND HERZEGOVINA
e-ARCHIVE PORTAL OF THE MINISTRY OF COMMUNICATIONS AND TRANSPORT

Bosnia and Herzegovina (BiH)'s Document Management systems are highly structured and procedurally clearly defined, and as such regulated under the legislation of the Law on Administrative Procedures of Bosnia and Herzegovina (BiH PS No. 69/02 dated 25 June 2002). Besides these regulations, the storage, recording and commissioning of documents demands significant effort, especially for large-scale projects in operation. Extensive implementation of a Document Management Systems has also been impeded by the inherent political complexity of institutions and landscape of the country.

At the Ministry of Transport and Communications BiH daily work is characterized by a large number and variety of applications received and documents sent, various problems arise in the processing and archiving of these. In order to solve these problems, the Department of Communications and Informatization has come up with a simple and low cost solution.

The main problems occurring in the office of the Ministry of Communications and Transport BiH's testimony civil servants and employees are:

- The loss of items, and difficulties in locating them

- Duplicate items or filling of the same subject under different numbers

- Working with bulk objects (CEMT, transportation line (international, inter-entity lines, licensee carriers, cards for drivers, vehicle licenses, etc …)

- Constantly updating and determining affiliated cases

- Slow pace of work caused by copying the same subject archived in several sectors, manually transferring data and archives as well as conducting alphabetical listing

- Effective review of archival records for the past year, if the same document is sought - one has to go down into the archives and scroll through the complete structure, which in each case takes time

- Difficulty navigating during colleague's absence from work for vacation or sick leave

This directly affects promptness in the execution of activities by civil servants, and leads to growing citizen dissatisfaction with the work of the Ministry of Communications and Transport of BiH. The purpose of this project was to solve problems that arise in the process of managing cases and documents in the administrative office.This system is already implemented in 30 different administrative institutions throughout BiH, of which at 11 at the level of Bosnia and Herzegovina. The limitations of the system derive from the fact that it is designed to solve the office problems and not as a complete document management system. In this regard, it can be incorporated into different DMS systems if the institution decides to introduce such a system. To implement e-registry of Ministry of Communications and Transport BiH procurement and implementation of software packages designed for computerization of the Registry following specific technical specifications. It is also necessary to link the various hardware components of the system.

General specifications of the Software for e-registryWeb-based applications
Centralized database
Support for web services
Multilingual support (at least for all 3 official languages of Bosnia and Herzegovina)
Modular system
Edit user data:
Changing application language
Edit basic data about the user
Changing the access password
Transfer of rights to access the system
Detailed user manual
Support for the following web browsers
Mozilla Firefox
Internet Explorer 7.0
Opera

Case Management Module	Administrator module
Administrator module in accordance with the Law on Administrative Procedures of Bosnia and Herzegovina and the Decision on office management	Administration Data
	Parties
Overview of completed cases and cases pending	Sectors
	Departments
Automatic generation of caseload	Statuses
	Classifications
The classification of items in accordance with the classification prescribed in the Law on Administrative Procedure	Types of documents
	Module Applications
	Manage users:
The mechanism to create, read, modify and delete items	Add, modify and delete system users
Tracking the contact information of parties	Edit user groups
	Edit all user data
Storing data connections to external parties in the cases	The definition of access rights of users in relation to:
The possibility of automatic recognition of double entry (by number, name objects)	Classifications
	Groups
The possibility of an arbitrary grouping of items	Department
	Procedures
Support for user-defined additional data that are generated from the system	Module Applications
	Administrator module to configure a Workflow
Mechanism for e-mail notices	

Implementation of "Workflow" module through all the steps describe the process

The possibility of specification of procedures in the system

Support for sequential and parallel procedures

The mechanism for the implementation deadlines with notification of the delayed visually and via e-mail

The possibility of attaching multiple electronic documents related to the subject

Directly download documents to your e-mail and scan from within applications

It allows for search by all parameters description

Possibility of changing procedures during the operation of the system without having to stop the application

Print jacket

Possibility of recovery deleted items

Multi-forwarding through the "Workflow" mechanism

The possibility of transfer of rights to access an application on another user by the user, which carries the right

Directly forward in the document management module

Creating a step in the procedures

Creating a rule change in status

Editing and deleting steps

Specification of performance rights

Grouping actions into procedures

Creating a system of arbitrary shape

The possibility of making the application form

Joining the form of classifications, types of documents, steps in the procedure

Implementation and commissioning takes 7-15 business days depending on the equipment and infrastructure available.

Costs of the project (without scanners, software and implementation) amount to 2500 Euros. The cost of 2 scanners needs to be added to this.

Contact:

Šadi Matar

Ministry of Communications and Transport BiH

Expert Advisor for Information Society

Sadi.Matar@mkt.gov.ba

CROATIA
CROATIAN INTERNET EXCHANGE

The Croatian Internet eXchange (CIX) is the Croatian national centre for Internet traffic exchange located in the University Computing Centre (SRCE) available to all ISPs in the Republic of Croatia, whether for commercial and non-commercial or private networks. The CIX service primarily provides economical exchange of traffic between Croatian ISPs and private networks, and in this way bypasses expensive international IP links.

By using the CIX service, every member can accomplish mutual exchange of traffic with all other members. If two members realise that they have a common interest, they can enter into a bilateral agreement, which has to be in accordance with terms and conditions defined in the CIX Rulebook. After the peering has been implemented, SRCE as the service provider has to be notified.

The required routing protocol for peering is BGP (version 4). The corresponding routing registry for the CIX peering documentation is RIPE database. The shared fabric for data exchange is Switched Ethernet. The purpose of peering is a direct interconnecting of ISPs in order to reduce unnecessary traffic via third networks (see details below).

CIX members can be any Internet Service Provider that provides its services to private and legal entities on the territory of the Republic of Croatia, a non-commercial network that provides its services to private and legal entities on the territory of the Republic of Croatia or a private network that provides its services to private and legal entities on the territory of the Republic of Croatia.

Each CIX member is responsible for purchasing equipment, purchasing telecommunication lines, transport and installation of computing and communication equipment, insurance of computing and communication equipment, configuration of computing and communication equipment and maintenance of telecommunication lines and computing and communication equipment. Moreover, CIX members accept responsibility for any damage done a third party's equipment caused by their own equipment;

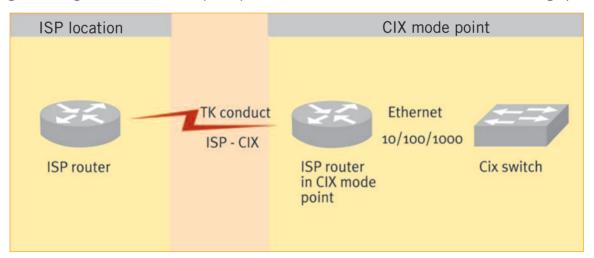Fees (for set up and monthly fees) are determined by SRCE according to the exact specification and the CIX service level, which is defined by the CIX Council on the "not-for-profit " principle. The CIX service price list is published on the CIX web pages. Each CIX member has to cover the costs of the communication channel to the CIX nod and the accompanying equipment necessary for the connection.

The CIX host (SRCE) houses the CIX members' equipment and provides the following services:

● LAN access (switched 10/100 BAseT)

● Continuous power supply

● Air-conditioned facilities

● Protection of the equipment from unauthorised access

● Access to the computer and communication equipment to the CIX members' authorised personnel

Technical implementation of peering begins with allocating an IP address from the so-called non-routable space (193.192.15.64/26), which has been allocated to CIX by RIPE. SRCE is responsible for all technical demands in relation to accommodation, maintenance and supervision of the CIX equipment. After that, peering needs to be implemented by using the BGP-4 protocol and over the Ethernet communication infrastructure of the CIX exchange point.

Figure 1: Logical scheme of the principle of a member's connection to the CIX exchange point

Source: http://www.cix.hr, http://www.SRCE.hr

Contact: SVEUČILIŠNI RAČUNSKI CENTAR
J.Marohnića b.b.
10000 Zagreb
e-mail: info@cix.hr

THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA2 SINGLE WINDOW APPLICATION FOR EXPORT/IMPORT LICENSES AND QUOTAS - EXIM

The application for export/import licenses and quotas (EXIM) significantly eases the process companies must go through to get licenses or quotas needed in foreign trade. EXIM is part of the Single Window and integrated border management concept implemented by the Government through the Customs Administration as a leading agency and it is foreseen to become an important trade facilitator for the business community.

EXIM is a single portal that enables businesses to electronically submit applications and obtain export, import and transit licenses from the government institutions involved in the process of international trade regulation. In addition to licenses, businesses can through EXIM apply for tariff-rate quotas distributed to the applicants on "first come, first served" basis. The system tracks the process of issuing and usage of licenses and quotas providing performance information to the institutions and to the companies. The use of the system is mandatory for the Customs Administration and the fifteen government institutions, and optional for the trading community. The service is available at all times. Time and cost are saved due to electronic submission of applications. An increased efficiency by participating institutions in the process of issuing of licenses is seen while electronic tracking of the issued licenses and online application and electronic distribution of tariff-rate quotas allow for better transparency.

EXIM was launched in November 2008 as a result of the joint effort of the USAID funded eGov Project and the Customs Administration. Ever since then, the number of its users is permanently increasing. Until June 2010, a total of 504 economic operators were registered in the EXIM system and 46.639 requests for licenses and 6.216 quota requests were submitted electronically through the EXIM system, which represents approximately 77% of all the submitted requests. During February-April 2009, the USAID funded eGov and BEA projects organized 5 detailed

---

2 The Regional Cooperation Council (RCC) under whose umbrella is the Electronic South Eastern Europe Initiative uses this appellation hence the terminology used in this publication

presentations of EXIM in Skopje, Tetovo, Bitola and Strumica. The presentations were attended by approximately 500 representatives of business community as potential users of EXIM.

MOLDOVA
NATIONAL REGISTRIES- REGISTRU

The center for National Registries or Registru has 1,900 staff, 96 offices (vehicle registration etc.), 48 projects 30 staff of the 1,900 use the digital signature. They have had 72m accesses to central database in last 4 years.

Registru are responsible for the links between different Ministries. They provide more than 700 services. These include ID Cards, Duplication Certificates, driver licenses, registration of legal entities, issuing passport etc. They hold the database and manage the data of all main registries. The Registru ensures integration between different registers. Each source also has its own security, apart from the Registru secure systems.

This is a single window Web interface with different levels of access. The public can check information on enterprises (legal entities); and can check information on themselves (civil database). Access Level 1 is for public service staff. Each person in the population has a unique 13 digit number, assigned at birth (a form is handed to the mother, and must be confirmed within 3 months at a Civil Registry office - as part of combating people smuggling). From the single window one can connect to the following fully integrated databases:

● Civil registry (includes all kinds of personal details) with a unique number on top

● Car ownership, license etc.

● Legal entities (enterprises) including directorships etc,

● Geographical indicators (including a map outlining the building in which you live, at pilot stage)

● Border crossing/customs information

● Tax/Fiscal status

Registry of population (civil registry) is updated daily and there are 50 civil registry and 45 vehicle registries around the country. 98% of the population is now on the registry, and have been issued ID cards.   As a result administrations can issue the ID card in as little as 4 hours for an extra fee, while 30 days is the normal wait.

The extent of integration and completion of all databases varies. Obviously, the main four Registries (population, vehicles, enterprises and geography) are all fully integrated.
Some eServices which were developed are already offered to a fully interactive level, although payment is currently made at post offices or banks. These are currently accessed via different Portal and Websites.[3]

Others such as state procurement or registry for defense mobilization are also exported to other CIS countries. Note that none of the services are mandatory (e.g. state procurement) because of low level of use and internet access so far.
The online register of business electronic licences launched in January 2009 generated 22,700 hits in its first five months of operation. The register allows business people to check the status of prospective partners before signing a contract with them. Before the register was accessible electronically to the public, entrepreneurs had to apply in writing and pay approximately 3 Euros to check on the licensing status of a potential partner; a reply would then typically take 30 days. The same information is now available online for free. The register also precludes periodic visits by the police or tax authorities to check on licenses as a pretext to extort a bribe. Businesses, when receiving a surprise visitor, can now use the online register to prove their license is valid[4].

---

[3] The Registru Portal is at http://www.e-services.md
[4] The USAID-BIZTAR project

MONTENEGRO
THE INTEGRAL HEALTH INFORMATION SYSTEM

In Montenegro, the reform of the health system has progressed especially in primary health care. Significant attention is paid to the development of information system (e-Health), to support all reform activities and ensure integration of business processes and data on the level of the primary system, as well as building the foundation to upgrade other parts of the system. This includes the development of information systems to enable more efficient consumption and use of resources in all areas and comparison between them. Thus opportunities will increase for better management in health care institutions and system in general. This reform is implemented by the Council for Privatization under its project ″Strategic Development of the Republic Fund for health insurance to 2011".

The Integral Health Information System in Montenegro consists of information systems of the Health Insurance Fund, the public pharmaceutical sector, all providers of health services at primary level and it is completely open for connection with higher levels of healthcare and other participants of the system.

In this system the insured patient is placed at the centre of the system and the money follows him/her considering all the treatments, services and drugs that patient is prescribed in the system. This implies standardization and support of the processes from beginning to end i.e. from the registration in the Health Insurance Fund through the choice of a physician and getting all needed services and medicines from health care providers and pharmacies. The coding methodologies implemented in the system are ATC/DDD for drugs, ICPC2 for services, ICD10 for diagnosis, etc.

The success of the system lies in the fact that it is deployed in the whole country and in the fact that once data is entered into the system, it becomes available in an appropriate manner to all segments of the system with respect to the rules of access and authority. For example, general registration data of any insured person generated in the Health Insurance Fund database becomes available to all other subjects in the system without the need to rewrite it. This approach reduces the possibility of error and makes collection of information from the system easier. For each ensured/patient in the system a Health Electronic Record and Financial electronic card are created.

Experience has shown that in the specific case of the introduction of ICT in the pharmaceutical sector in Montenegro after 1st of January 2004, the quality of supply in the pharmacies increased and the return on investment in ICT was just three months.

ROMANIA
KNOWLEDGE BASED ECONOMY

Knowledge economy project (KEP), the initiative of the Ministry of Communications and Information Society (MCIS), is drawing a sustainable model of how gross domestic product may grow through investment in human capital, with information technology as a key component.

The project supports knowledge-driven activities, financing the establishment of Local Communities e-Networks (LCeNs), whereby communities are offered access to knowledge through a number of services and technologies, including computers, Internet and communication services as well as specific content provision for different target groups (citizens, businesses and pupils) in rural and small urban communities.

KEP is an award winning programme in the following:
- European Public Sector Award EPSA 2011 best practice certificate, "Smart Public Service in a Cold Economic Climate" category, 2011
- Computer World Honors Program Laureate at „Digital Access" Category, Washington, 2011
- Romanian National Competition of Best Practices in Public Administration, 1st Prize, "Improving public services through quality management and organizational performance" category, Bucharest, 2010
- International Project Excellence Awards 2010, Finalist, "Project Excellence in Medium-Sized Projects" category, organized by the International Project Management Association (IPMA), 2010
- European Union e-Inclusion Competition, medalist, "Geographic Inclusion" category, Vienna, 2008
- Romanian IT&C awards, category, Bucharest, 2006

KEP has guidelines and materialized benefits based on ICTs since access to information and knowledge are the key driver of social development. It also mainstreaming smart growth in a cold economic climate when public sector budget is cut and there is an increasing demand for public services.

Following the approach of KEP a relevant number of ICT based local development plans analysis has been carried out, and the insights were divided into four main categories, depending on the

strategic directions set in their plans:

1. Communities having as priority the training and mentoring of the people, including identifying job opportunities, by developing Centers for assistance in the field of professional training and employment;

2. Communities having as priority providing services in accessing funds at local level by developing Centers for attracting funding at local level;

3. Communities focused on tourism, providing information by developing Centers for touristic information;

4. Communities having as priority increased efficiency and modernization through ICT services targeting the Local Public Administration (LPA).

By providing access to ICT, knowledge and skills, useful services targeted to local needs, KEP has generated positive, more pro-active attitudes, it has contributed to changing the mentality and behaviors of many stakeholders towards communication and participation in the life of the community, contributed to improved self-esteem and pride of local values, helped attract additional funds for infrastructure development and thus improved the living conditions.

The experience in partnering with public and private organizations, peer-to-peer community collaboration and cross-border cooperation in several projects, recommends KEP model and MCIS as drivers for helping the regions to connect and to learn from each other, supporting the regions in their own development and helping them to disseminate their best ideas. The target of the MCIS strategy is to localize Digital Agenda in its diversity of problems and social challenges through direct projects generating major positive impact in direct correlation with Europa 2020.

Cross border projects that could be also contained in the Digital Agenda for Romania are:

- Regional platform for electronic billing and cross-border bills exchange

- National digital library and cross-border books exchange

- European Platform for Roma people and other minorities

- Management and evaluation system for medical cases - Telemedicine

- Rural touristic European platform - Danube itinerary

- Management of cross-border emergency situations

- Management of cross-border environmental incidents

- Regional cooperation for the employment and development of labor skills

- Integrated platform for consumer affairs

- Integrated platform for agriculture production and traceability management

SERBIA
REAL ESTATE CADASTRE AND
REGISTRATION PROJECT

The main aim of this Project is to extend support to the development and general advancement of the real estate market on the territory of the Republic through formation of a unique real estate cadastre on its territory. The Project Implementation Plan (PIP) assists the Republic's Geodetic Authority (RGA) as the Government institution in charge of preparation and implementation of the Project, to implement in an organized and comprehensive manner the adopted solutions. Also the Project have as an aim the formation of more efficient systems of land, real estate and ownership rights management as to extend support to the development of an efficient real estate market. The project has two components:

- Technical and Operational Development and Support: The objective of this component is the development of a methodology and formation of a real estate cadastre, as well as its maintenance combined with the quality services extended to the customers. This component implies support to the RGZ in completion of works on the real estate cadastre in shorter delays than those envisaged, support for improvement of the system of real estate registration and delivery of quality services to the clients, as well as creation of conditions for introduction of a modern digital graphic databases.

- Institutional Development and Capacity Building: The objective of this component is to ensure an institutional development and capacity building within the RGZ, among the professionals from the private sector (mostly surveyors, geodetic specialists and similar), as well as within the institutions that are introducing data, and to which a large chunk of technical tasks of importance for the real estate cadastre will be transferred. It includes: project management and programs to develop annual business plans leading to financial self-sustainability, training of staff; public awareness and development of the full land administration legal framework.

According to the financing agency's report[5], "the Project has successfully decreased the time for registering property rights from more than 60 days in 2005 to less than 10 days for 30% of the offices in 2009. The growth in mortgages, which reflects investments in buying or utilizing property, has already exceeded project targets despite the recent slowdown in the property market due to the global financial crisis. In addition, 90% of all cadastral municipalities are now

[5] The World Bank, http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/08/09/000333038_20100809004746/Rendered/PDF/560360PJPR0v101ing0Paper0July0200v4.pdf

included within the system, from a base line of 44% in November 2004.

The Project has experienced some delays in development of an integrated IT system and this in turn has made it more difficult to meet service standards that were agreed during project preparation. There were also problems encountered when the local courts, who were previously the registering authority, had to give up the land books to the RGA. The local courts resisted this for several years, but this issue is now resolved. These issues led to project restructuring that was completed in April 2010. The restructuring included an extension of the Project by one year and some re-allocation of funds between "expenditure" categories.

The original objective of requiring executive agency status was to emulate good practice models seen in the Netherlands and England and Wales. The delays in receiving land books from the courts, referred above, delayed the establishment of the real estate cadastre in the major towns, including Belgrade. This in turn reduced the income that could be received by RGA and the opportunity for RGA to become a completely self-funding agency within the time frame of the project. It is still an aim to achieve autonomy, but a recently produced revision to the RGA business plan shows that self-funding status will not be reached until after the project is closed. It was unrealistic, and unnecessary, to make establishment of an executive agency status as a loan covenant. Most countries of the EU do not have executive agency status for their registration, but it was considered a good business model to which Serbia should aspire. It is still a goal for the government, but will not be achieved until one year after the closure of the project. The amendment will have no impact on the ability of the Borrower to fulfill the development objective of the project. The delays in receiving the land books from the courts and the delayed completion of the IT system, has affected the rate at which services are provided."

Information: www.worldbank.org.yu

UNMIK/KOSOVO[6]
ESTABLISHING AN INTERNET EXCANGE POINT IN KOSOVO TO STIMULATE SECTOR GROWTH IN A SMALL MARKET

As part of its effort to increase competitiveness in the ICT sector, an Internet Exchange Point (IXP) is being established in Kosovo. This is the result of joint efforts of the Telecommunications Regulatory Authority, the Ministry of Transport and Communications, the Internet Service Providers, the University of Prishtina, and two donor country partners. At present, any Internet communication that a user sends to another user must go beyond borders it to be delivered. Domestic traffic represents about 10-15 per cent of total traffic. In some cases, a domestic message must pass through as many as 14 different switches or routers (each pass is known as a "hop") before it can be returned to Kosovo for delivery. The major Internet Service Providers (ISPs) that have their own international links for Internet service have correspondent, or transit relationships with foreign carriers to carry this traffic.

This situation creates economic, technical, and security deficiencies for Internet service. First, international transit is expensive and these costs get passed on to users. Second, the more hops that a message has to make between "send" and "receive," the more delayed, and the more degraded the communication becomes. Finally, each separate foreign hop that domestic traffic has to make before it returns to Kosovo increases its vulnerability to surveillance, or "sniffing." If not remedied, these deficiencies will have a negative impact on overall ICT sector growth and development because they lead to higher input costs for ICT sector businesses and make it impossible for ICT businesses that require low latency Internet to even think about getting started. The IXP facility will enable ISPs interconnect and exchange their domestic traffic, usually for free under so-called "peering" arrangements. An IXP eliminates the need to export domestic Internet traffic, which reduces cost and, by reducing the number of hops the traffic has to make, increases its technical quality. And, by "keeping local traffic local," security vulnerability is also reduced. Moreover, as a result of these improvements, an IXP can promote foreign direct investment by enabling new ICT businesses to enter the market and locate directly at the IXP. In most markets where IXPs have been set up, significant domestic sector growth has occurred within two to three years. Finally, an IXP can serve as the locus for increased education and training opportunities and a magnet around which the Internet community can

---

[6] Reference to Kosovo in this document, if any, does not make references to it as a territory, province, or country, and is made pursuant to United Nations Security Council Resolution 1244 (1999)

coalesce, especially when an educational institution is chosen to be the host.

An approach has been taken based on the provision of support for the capital expense of building an IXP and a short-term partial subsidy for the operating expenses of the IXP during its first two to three years of operation. The interest is two-fold: to promote the further development of its ICT market and it believes that obtaining the enhanced protection for the security of its intra-governmental Internet communications that an IXP will provide is a sufficient cause for taking action rather than waiting for the commercial incentives to be aligned in a way that will lead the ISPs to create an IXP on their own. The Telecommunications Regulatory Authority (TRA) has conducted a stakeholder consultation on the IXP. As a result, consensus has been achieved among the four major ISPs in Kosovo on the key policy and technical issues, as well as the options for building and situating the IXP. The general agreement among ISPs and TRA is:

- IXP operations should be subsidized by TRA for a temporary 18-month to two-year period, including the salary of an executive director who will be appointed and employed by the TRA;

- ISP members will be required to contribute to costs of maintaining the IXP, perhaps at ¤100-150 per month per ISP. The IXP will be a non-profit entity hosted by the Faculty of Computer and Electrical Engineering ("FIEK") at the University of Prishtina and operated under TRA auspices during the temporary period;

- TRA will set the rules for the IXP in line with the ISP consensus and international best practice. In addition to the one paid staff, FIEK will provide graduate students on a regular basis to work at the IXP, which will reduce operational costs and bring engineers-in-training into contact with the ISP engineers serving on the IXP "Technical Committee;"

- FIEK has offered a proposed site for the IXP in a recently renovated, ground-floor FIEK computer lab, and it is quite suitable;

- All the major ISPs have agreed to participate in the IXP and have reached consensus on the basic technical configuration, eligibility requirements, and governance rules that should apply, although some further details remain to be worked out; and

- Donors will continue to provide ongoing technical and financial support as needed to ensure the smooth start up and operation of the IXP.

At a cost of less than ¤150,000, the IXP will be a relatively inexpensive, high visibility, "quick win" for the ICT sector that will satisfy an important pre-condition for future sector growth and development. It can also be an example of public/private sector cooperation for sector improvement, as well as a significant educational opportunity for future ICT professionals.

2. Innovation and Investment in ICT Research and Education

Accelerating the transition from a resource-based society to a knowledge-based society requires the mobilization of a broad range of actions, many already address by most governments in SEE. One area particularly crucial for the future is that of innovation, research and education. Although the long term yields can dampen the political will for investment, SEE has taken a dynamic approach to investment in this area.

ALBANIA
E-SCHOOLS PROGRAMME

The e-Schools Project aimed at providing primary and secondary schools in Albania with modern computer labs, equipped with high-speed, reliable Internet connectivity. The Programme also addressed the needs and capacity of teachers to use ICT though a number of practical training courses and developed ICT curricula.

The e-Schools Project in Albania originated in 2005 as a support initiative to the already existing project started by the Albanian Prime Minister with assistance from UNDP. The Government of Albania, assisted by UNDP, created a Working Group in late 2005 for drafting the Master Plan for the e-School Programme. The Working Group in close cooperation with the UNDP experts produced the Master Plan that was officially launched by the Albanian Prime Minister on 19 December 2005. During the implementation of the project a set of educational targets of ICT in schools has been introduced. Standards are defined and being introduced for training of teachers and trainers on ICT basics, use of computers and productivity applications, basic Internet techniques, basic computer and network troubleshooting. Hundreds of Informatics teachers have been trained in the subjects of new ICT curriculum for public schools, and received their credentials and certificates. A new modern ICT curriculum is developed and implemented for elementary and high schools.

The Master Plan of the e-schools program in education supported the effort of the Albanian government to narrow the digital divide by increasing the use of ICT across the curriculum in schools, lowering student-computer ratio, enhanced accessibility of students to computers due to more open access areas, and access to the internet for all pre-university school students.

As a result of implementation of the e-schools programme and in the framework of the Education Excellence and Equity Project, the Ministry of Education and Science (MoES), as well as its partners equipped with internet connection 100% of public schools, equipped all pre-university schools with computer labs, and most of the teachers were trained or are being trained to use ICT in the curriculum. In Albania, over 500,000 students will be able to benefit from the "Internet connectivity across 2,107 schools of the pre-university system" project, which has been implemented across 380 secondary schools, and 1,477 junior schools, and 250 elementary schools.

Partnerships have played a crucial role in the implementation and maintaining sustainability of

the Project. The project has initiated and completed the national Partners in Learning (PIL) agreement between the Microsoft Corporation and the Albanian government that allows all public schools to install free and subsidized software under the auspices of PiL. The Ministry of Education and Science and local governments were the key partners in the implementation of this programme. The Ministry of Education established an inter-ministerial National Task Force and expert sub-committees to guide the implementation of the Programme. Expert sub-committees established work-plans for the implementation of the Programme according to identifiable specific fields. The MoES also organized its structures in regions in order to assist the implementation of the Programme. In accordance with the Prime Minister's request for the UNDP assistance, UNDP contributed US$829,373 for the project mainly for the set up the Programme Implementation Unit (PIU) located at the Ministry of Education and Science responsible for the implementation of the Programme.

There were also numerous private donors, who have contributed to the e-Schools project such as the Chinese government which donated 1,360 computers, the Albanian Banking Association, Western Union Corporation and Raiffeisen Bank donated cash while other private corporations donated equipment for computer labs. The total Project cost is estimated to be USD 75 million, with 40% being paid out of the State Budget, and 60% through a loan by several banks.

The Ministry of Education and Science is currently articulating the development and implementation of the next stages of the inclusion and integration of the ICT in Education of the pre-university school system in Albania. The e-Schools initiative is going to continue with the creation of the Directory of Educational Technologies within MoES. The Directory of Educational Technologies will provide leadership and service of the technology integration processes in education by promoting the effective use of emerging technologies. Also, within each Regional Education Directory and Educational Offices there are created as part of their organizational structure the sectors of IT and Statistics. The IT sectors will play an important role in building school leadership capacity in technology planning, implementation and evaluation.

Website: http://www.eschools.org.al/

BOSNIA AND HERZEGOVINA DIGITALIZATION AND INFORMATIZATION OF CULTURAL HERITAGE OF BOSNIA AND HERZEGOVINA

The Digitization of cultural and scientific heritage includes mainly the:

- Digital capture and transformation from analogue to digital form,

- Describing and representations of heritage objects and documentation about them,

- Processing of digitized content,

- Presentation and long term preservation of digitized content

The Faculty of Electrical Engineering in Sarajevo and the Sarajevo School of Science and Technology in partnership with the company 5D-CADD d.o.o. Sarajevo, launched an initiative for digitization of cultural heritage using computer graphics and 3D technologies.

The project created:

- Virtual museums

- Digital catalogues of cultural artifacts

- Virtual 3D reconstruction of damaged or destroyed monuments

The project receives limited financial support from the Ministry of Education of the Federation BIH, the Cantonal Ministry of Culture and the BH Telecom. One project was financed by the Greek Embassy in Sarajevo.

The project is staffed by faculty members and provides hands-on training to students of the Faculty of Engineering and of the Sarajevo School of Science and Technology. National and regional cooperation with similar institutions are expected to bring fruits in terms of funding opportunities within the EU IPA funds and FP7 calls. The team hosted the fifth South-Eastern Europe Digitization Initiative (SEEDI) International Conference: Digitization of cultural and scientific heritage, on May 19-20 2010, in Sarajevo.

Contact:

Bosnia and Herzegovina Digitalization and Informatization of Cultural Heritage of Bosnia and Herzegovina, http://www.digi.ba

Project leader: Dr. Selma Rizvić: selma.rizvic@digi.ba

Technical Coordinator: Dino Selimović: dino.selimovic@digi.ba

CROATIA
E-ISLANDS: CONNECTING SCHOOLS AND PROVIDING QUALITY EDUCATION TO ISLANDS

The e-Islands project connects schools on Croatian islands with the mainland and is part of the Connected Schools initiative using the Croatian Academic and Research Network (CARNet). Croatia has the largest archipelago (698 islands, 389 islets, and 78 reefs) in the Adriatic Sea, and the second largest in the Mediterranean Sea after Greece.

The e-Islands project helps teachers to give virtual lectures to pupils using video and multimedia equipment over the IP network. The collaboration between CARNet, Cisco, and other technology partners is based on providing users with a unique virtual identity, via EDUROAM (a world-wide roaming access service developed for the international research and education community, which can be used in any institution to access education services, shared content and online learning and support tools. Provided free of charge to schools, these services include email, Internet, videoconferencing, and web hosting. Members can also access the online national encyclopedia (the first of its kind in Croatia), applications for content management and portal building, information exchange forums, and the Internet via the GÉANT network. Twenty-one schools on the islands around Zadar, šibenik, Trogir, and Dubrovnik have been connected with regional schools. The e-Islands project delivers digital education content and enables teachers on the mainland to give lectures to pupils on the islands using video and multimedia equipment, such as projectors, cameras, microphones, and smart-boards (touch-sensitive whiteboards for displaying computer output) over the IP network.

This provides parents from the dwindling children population on isolated islands access to quality education options and an alternative to relocation or sending their children to the mainland.

This model could also be applied to schools in underdeveloped and geographically less accessible regions of the mainland. Options to connect local healthcare institutions to the network are being considered to reduce the patient transportation requirements for medical examinations or check-ups, diagnostic assistance for citizens living on the islands.

Contact:

CARNet

Joseph Marohnića 5

10000 Zagreb

tel.: +385 1 6661 616

e-mail: ured@carnet.hr

http://www.carnet.hr/

Portal for Schools http://www.skole.hr/

FORMER YUGOSLAV REPUBLIC OF MACEDONIA USE OF UBUNTU-POWERED COMPUTER WORK STATIONS FOR CLASSROOM DESKTOPS

The Ministry of information society (MIS) in coordination with the Ministry of Education and Science (MOS) of the Former Yugoslav Republic of Macedonia implemented the project "Computer for Every Child" with the installation of computers in all primary and secondary schools and giving each teacher from each primary and secondary school a lap top computer., including installation of 43 educational tools translated into Macedonian and Albanian language of all computers. These workstations run EDUBUNTU, a version of Linux for the desktop, laptop, thin client and server which brings together open source software every six months. UBUNTU is free, community-developed and contains all of the necessary applications to be up and running immediately, from web browser to instant messaging. Users are therefore able to modify, use and redistribute it, turning students into participants in Information Technology and not simply consumers. It also comes with English, Albanian and Macedonian language packs.

The project enables a range of innovative educational programs, including interactive web-based classes in which specialized experts teach lessons in such areas as mathematics, biology, chemistry and physics to multiple schools and classrooms around the country. Edubuntu was introduced in 2008 and teachers received training to us it.

In September 2009, the MIS started broadcasting a series of 40 educational programs covering the operating system Edubuntu, Open Office and educational for mathematics, chemistry, physics, geography, Latin, music and science on both services of the Radio Television of Former Yugoslav Republic of Macedonia in Macedonian and Albanian languages. Half of elementary and secondary students in the country attend school in the morning, and half attend in the afternoon, therefore programmes are repeated twice a day. They are also available online.

For more details see Ministry of Education and Science

http://www.mon.gov.mk/   http://www.mio.gov.mk/

Or Ministry for Information Society   See broadcasting emissions on http://www.mio.gov.mk/?q=node/2247

MOLDOVA
LEAP PROGRAMME FOR INFORMATISATION OF EDUCATION

The 'Leap' Programme (Programme of Informatisation of Education), going since 2004, has resulted in over 700 of the 1,500 primary and secondary level schools having a computer lab (each with a minimum of 11 PCs, nearly 50%, up from 41.5 % on 2008); and almost all connected to the internet, 50% by ADSL, 46% by dialup, 4% using 3G mobile, 98% are connected in a LAN. The student to computer ratio is 26:1 and expected to be 24:1 by end of the year.

At present the labs are used mainly for the ICT curriculum, with about 10% (in 9th to 12th grade) also being used for other subjects. The programme continues with developing ICT tools for schools managements and with new pedagogical software in others subject. All operate in Romanian and Russian, and use Microsoft software although government policy is to use Open Source software where possible.

The benefits of ICTs are also greater if the PCs are connected to the internet. And the benefits spread to the community too. The students get their families interested. Many use them to use free calls such as skype to the diaspora population (Schools are free to make them available to the public or parents, as they choose.)

The local public authorities, who are responsible for the schools, shoulder the cost of internet connections while computer maintenance is integrated in the schools budget. Basically the programme is mainstreamed into the educational system. ISPs also offer free websites and other things.

The 'Leap' schools programme has been implemented for a sufficient period to see its effects. It has already led to a significant growth in third level students in ICT subjects, in both quality and quantity. The Polytechnic, for instance, had about 80 students annually in ICTs subjects in 2005, and it has now risen to almost 500. The number of graduates is also rising, and demand is such that they are reportedly starting employment with higher wages than their lecturers! Benefits are also spreading to the community. Students are getting their families interested in the internet, and many schools are opening access to wider families and community.

ICTs at Third Level Education:

● A few 3rd level colleges have teacher training in ICTs

● There is vocational training provided to public service at local, similar to the ECDL

● The Polytechnic has worked with some public administration and two universities to produce a package then gave it to the Academy of Public Administration to implement it.

● Contests are also organised for students and teachers in ICTs, offering certificates. Participation is not as high as desired, but rising.

The Institute of Higher Education has developed distance learning, but it does not have enough funding, but it is ready to proceed. The platform is MOODLE

At the moment the starting point got ICTs in school curriculum is 7th grade. On the medium-term, it should start at 1st grade. Qualitative use of ICTs for curriculum improvement is also featured in plans.

MONTENEGRO
MONTENEGRO EDUCATIONAL INFORMATION SYSTEM

The Ministry of Education and Science has prioritised the introduction of ICTs in education system. The beginning of 2003 saw the launch of a major project, MEIS (Montenegro Educational Information System), defining the specific methods, resources and technologies required for the implementation of the information society within education.

Progress is tangible and covers a large range of areas.

● Today, all secondary schools have an internet connection and are equipped at minimum with a LAN, a PC for administration, and a computer classroom/lab. Of a total of about 200 primary schools, 162 are ICT equipped, 80 of these (mostly very small rural schools), however, without permanent internet connection.

● A school portal for teachers has been developed to allow them to share learning materials, form discussion groups and so forth;

● Each school is also getting its own Website, and a competition for the best Website design is running to offer encouragement;

An extra-curricular course on Website development is running very successfully. This course is undertaken as collaboration between the Ministry of Education and the Bureau of Education (responsible for approving the National curricula). There years ago very few students had ICT experience and, encouraged by the Minister, the Ministry prepared and proposed extra curricular (non-obligatory) courses on the ICT skills. The Ministry deployed only internally available resources, trained their teachers and developed the final examination testing. This approach has proved to be successful, both in terms of the approved number of ICT courses and participants, with this now being the third most popular extra curricular course nationally, but also in terms of financial benefits as it delivered significant results from modest funding.

In December 2009, the Ministry of Education and Science in partnership with Microsoft-Montenegro launched an on-line magazine ″Prozor″[7] whose aim is to facilitate the exchange of experiences among teachers in the educational system of Montenegro, and to present examples of good teaching practices, particularly the use of technology in education, e-learning.

[7] http://pilprozor.spaces.live.com

ROMANIA
E-LEARNING ROMANIA

The e-learning Romania portal (http://www.elearning.ro) includes materials, articles, surveys, announcements and current information on the use of information and communication technologies in education.

It is developed in a partnership between AltFactor Romania, Association for Science Education (ASTED), National Foundation for Community Development, Institute of Education Sciences, TEHNE - Center for Development and Innovation in Education, Centre for Advanced Learning Systems of the Polytechnic University of Bucharest and the Faculty of Psychology and Educational Sciences of the University of Bucharest.

Users can find information in terms of Internet courses with a series of links to:

● Online courses in Romanian

● Online courses in English

● Online courses in French

● Computer Assisted Training

● Courses using ICTs in education

The site also provides a critical overview of offers available on the Romanian market of

● Educational Software

● Applications, support for educational process

● Virtual environments for formal and non-formal education

It links to the e-learning forum (http://www.elearning-forum.ro/) for thematic exchange and support of experience.

Contact:

TEHNE - Center for Development and Innovation in Education

www.tehne.ro

050 536 Bucharest, Dr. Louis Pasteur Street 54

Tel. / Fax: 021-410.4332

Email: editor (at) elearning.ro

SERBIA
SEE LIGHT PROJECT

The SEELight project tackles the development of the South-East European Lambda Network Facility for the regional research, academic and education communities. The network will enable the provision of end-to-end network services to meet user demands, serving as a test bed for development of new networks and services, and allowing the SEE research and education community to participate in international networking activities.

The project is funded within the Hellenic Plan for the Economic Reconstruction of the Balkans (HiPERB) framework. Construction is anticipated to last for two years (2009 Ð 2011) in each beneficiary country, while the network is expected to be provided for a period of 15 years. This is the first agreement that Serbia has signed in the framework of the Hellenic Plan. The Greek research and educational network GRNET and the Electro Technical Faculty of Belgrade will administer the project.

The project envisages leasing optical telecommunications systems for a period of 15 years and the purchase of equipment for the academic network in Serbia.

The project is the response to the need of the SEE region for high-quality research and education, through:

- the deployment of a SEE regional lambda networking facility (redundant optical rings, which will constitute the infrastructure that will be the basis for sustainable development and operation of the regional networking infrastructures;

- the purchasing of new and/or upgrading of existing networking equipment as a vital step towards improving the reliability and capacity of the networks;

- the deployment of the South-Eastern European Network Operation Centre (SEENOC). The SEENOC will ensure that network services and operation is unobtrusive, will amass the necessary level of competence and will foster development cooperation on all levels.

The project's estimated budget is 19.8m¤; 80% of which will be by provided the Greek Ministry of Foreign Affairs in the context of the HiPERB framework, while the other 20% comes from the beneficiary countries. The second part of the project concerning leasing optical infrastructure for linking academic institutions in Serbia through Macedonia and Greece with the rest of the

European education network will cost ¤5 million. The third part of the project for the purchase of equipment will cost ¤700,000.

Four countries have applied successfully up to now namely, Bulgaria, FYROM, Romania and Serbia. The project is expected to be completed in 2011, specifying that in addition to Serbia, Macedonia, Albania, Bulgaria, Montenegro and Bosnia-Herzegovina will also take part.

The project will enable young scientists from Serbia to freely cooperate with their counterparts in other countries, as well as to apply for European projects more easily and therefore to receive financial assistance for the realization of their ideas much faster.

Information: http://www.grnet.gr

UNMIK/KOSOVO ENHANCEMENT OF "E-READINESS" IN SCHOOLS

The public-private-partnership project: "Enhancement of e-Readiness in Kosovo Schools" is the first project of this kind in Kosovo. The project partners: Smart Bits, GTZ and MEST (Ministry of Education, Science and Technology) have joined their forces in this project to setup the foundation of the e-Learning. The project began in December 2007 and was completed in November of 2009. The total investment in the project was 251,200.00 EUR, shared between Smart Bits and GTZ.

The objective of the project is to integrate e-Learning into the primary and lower secondary school system and to enhance the ability to use Information and Communication Technologies ("e-Readiness") in 5 pilot schools. To achieve this goal, the project supported the Ministry of Education, Science and Technology (MEST) in:

- Development of a nationwide e-Learning implementing strategy

- Introduction e-Learning in 5 primary and lower secondary pilot schools.

- Development of digital literacy curriculum and implementation in the five pilot schools.

- Development and implementation of two e-Learning contents: "Fit4EU" and "Creative Conflict Resolution - Communicating without violence" (www.edukumi.net)

- Establishment of a LMS (learning management system) with integrated e-learning contents

During project implementation altogether 300 students and 30 teachers will have registered access to the LMS and be trained in digital literacy or in one of the developed eLearning contents on non-violent communication methods and on the opportunities and challenges of the European Union.

E-learning, being a very effective means of communication and improving the flexibility and quality of learning, is seen as offering solutions to several challenges which the youth and education system are currently facing. Digital literacy is considered to enhance young peoples'

skills to cope with the challenges of modern jobs which increasingly depend on a skilled use of ICT. As a consequence, digitally educated youths are expected to find employment more easily. Digital literacy is thus considered, in the long run, to contribute towards reducing unemployment among youth, which at present is as high as 60%. e-Learning is also considered appropriate to develop young peoples' competences through methods of active learning and critical thinking, thereby encouraging initiative and tolerance among young people, which may, in the long run, combined with better economic prospects, contribute towards reducing violence at schools. To answer these challenges, the MEST has planned the introduction of e-Learning in schools, especially by contributing to the establishment of a sustainable linkage of education with global economic and social developments.

Source: http://www.mesimi.net/data/digital%20literacy.pdf

Kosovo has applied for 2 million Euros of IPA funds for an EU - IT Pilot Project in the field of Education building on the success of this project among others.

3. Inclusive Information Society

The effective and efficient use of new technologies and products in arriving at an inclusive society requires that concrete strategic plans and programmes for action are established to achieve these goals. At the same time, policy makers need to be careful that their policy tools reduce geographical divides, do not create market distortions, enhance e-accessibility and usability, improve digital literacy and competences and address the needs of marginal social groups, and promote inclusive eGovernment.

ALBANIA
E-PROCUREMENT

The electronic procurement platform is a web-based application, supporting the automation of all the Albanian contracting authorities. This system does enable secure transactions among Albanian public institutions and national and international business community. The successful application of the e-procurement system was a major challenge, and a great achievement for the Albanian public procurement system.

It offers a secure, efficient and transparent preparation and administration of all tender-related documents, removing unnecessary paper work and providing secure data flow throughout the entire process. All the tender documents from contract notice to notifying the winning bidder and on to the signed contract are available in the electronic public procurement system (on the web-site www.app.gov.al), and all the transactions, from the download of documents till the opening of bids by electronic means, can be done at anytime and anywhere the economic operators are in over Albania. All transactions are free of charge.

The electronic public procurement system (EPS) reduces the applications time, eliminates unnecessary documents, facilitates and standardizes the process of introduction with the tender conditions. Likewise, it guarantees the secrecy of offers, and at the opening time of the procedures, allows the simultaneous publication of the offers. Moreover, the electronic system does generate reports enabling ulterior inspections, and reducing the possibility of corruptive deviations.

The system provides a greater participation of the economic operators in the public procurement procedures, since they can submit their offers by electronic means, from their workplace, and having information on the procurement procedure they have applied on real time basis, without being necessary to be present at the Contracting Authorities. So, the competition is greater, and consequently there are provided goods and services with a better quality or a lower price.

All Albanian economic operators recognised by the National Registration Center of Businesses can apply to register with the electronic procurement system as well. Once registered, they can participate to the public procurement procedures and submit their offers electronically. Foreign economic operators must also be registered and provided with a user name and password to access the electronic procurement system. This can be done through registering on-line as an economic operator, or even at the Public Procurement Office. The registration need be done only

once, and is valid for all public procurement procedures delivered in Albania, at any time.

Benefits of using the e-procurement system are also measurable in concrete terms. For example the percentage of the limit funds saved in electronic procedures is 15% and number of bidders from paper bases procedures to electronic procedures is increased from 2.3 to 7.7 bidders. Also relevant in this regard is that a total of 224,141 documents were downloaded from the PPA website, and the total number of bids through the EPS was 69,073. These are clear indexes of high level of communication and transparency of this system.

BOSNIA AND HERZEGOVINA IT COMPONENT OF THE NATIONAL GENDER STRATEGY

In Bosnia and Herzegovina (BiH), the Council of Ministers adopted in 2006 the Gender Action Plan for Bosnia and Herzegovina of the Gender Equality Agency of the Ministry for Human Rights and Refugees of Bosnia and Herzegovina (GEA of the MoHRR BIH). This Gender Action Plan devotes a full chapter, chapter 15, to ICT outlining a set of measures for reaching targets to increase gender equality through ICT. The document refers to eSEE Initiative plans and states that the next ICT Policy, Strategy and Action Plan of BIH has to be gender mainstreamed, in line with the existing international and national standards, legislation and recommendations. The basic goal of the IT component of the Gender Action Plan is: ˝Reduced gender discrepancy in access, use and training in the field of information and communication technologies (ICT) in all areas˝. Responsibility for each action is assigned, monitoring and partners are defined along with a time frame.

Noteworthy activities planned include:

1. To harmonise laws, bylaws and other regulations from the field of information and communication technologies with the Law on Gender Equality in Bosnia and Herzegovina, in accordance with Article 30 of the Law on Gender Equality in Bosnia and Herzegovina

2. To fully implement Article 2 of the European Commission Agreement; Articles 141 (3), 13 (1) and 137 of the Agreement on the EU Legislation on gender equality; Council Directive 2004/113/EC; recommendation of the World Summit on the Information Society and Directions of the International Telecommunication Union ITU (TFGI-4/5E) and to monitor their implementation from the gender aspect

3. To integrate gender into the existing policies, strategies and action plans for information society, and to plan the process of gender integration into new areas like e-governments, e-education, and e-business

4. To elaborate programmes for creation of the setting in BiH society which in practice provides equal opportunities for both sexes for access, training and use of information and communication technologies, in accordance with Recommendation (98) 14 of the Committee of Ministers to

the member states on gender mainstreaming

5. To develop gender sensitive indicators of information society development and methodology of collection of gender disaggregated statistical data which will provide an insight into level of access and use of information and communication technologies in Government, public and private enterprises, international and nongovernmental organisations, media, as well as in the education sector in Bosnia and Herzegovina

6. To conduct research on level of access and use of information and communication technologies in Government, public and private enterprises, international and nongovernmental organisations, media, as well as in the education sector in Bosnia and Herzegovina from the gender aspect

7. To include gender component in defining of frames, situation and needs in ICT area

8. To keep records and to classify the existing ICT programmes, projects, human and financial resources in Bosnia and Herzegovina and in the South-eastern Europe region

9. To elaborate a system of education and promotion of ICTs for women and men in public and private enterprises, international and nongovernmental organisations, Government and the education sector in Bosnia and Herzegovina, with particular accent on importance and role of a gender sensitive approach to information and communication technologies

10. To organise promotion campaigns, including conferences, round tables, as well as media campaigns for raising awareness of citizens on potentials offered by information and communication technologies for economic, social and cultural development of individuals and society

11. To implement ICT programmes, providing equal opportunities and access to information and communication technologies for women and men and to monitor their implementation from the gender aspect

12. To promote equal representation of both sexes in the process of designing of contents and budget, implementation and evaluation of gender sensitive ICT policies, strategies and action plans in Bosnia and Herzegovina and in the Region, in accordance with Article 15 of the Law on Gender Equality in Bosnia and Herzegovina

13. To elaborate indicators for monitoring success of implementation of activities in the field of Information and Communication Technologies

14.To undertake measures for allocation of funds for implementation of activities of the Gender

Action Plan of BiH, through establishment of budget lines within Ministries, as well as through requesting funds from international donors, in accordance with the recommendations of the UN CEDAW Committee.

CROATIA
E-HEALTH CROATIA

The Healthcare Networking Information System represents a comprehensive solution designed for the integration of healthcare processes, information management and business workflows for healthcare organizations, enterprises and delivery systems. It is developed as a modular, secure, and open communication platform that efficiently synergizes common enterprise integration services with healthcare specific application components.

With care services supported by the system, care delivery organizations and enterprises can boost the efficiency of their financing, planning and the quality of care provision in a secure environment. To date some 2400 primary healthcare teams in all 20 counties and in the City of Zagreb have been networked. The first phase was initiated 2005, since then a number of phases were delivered.

The solution allows e-prescription and e-referrals to be sent directly to pharmacies and labs / hospitals instead of carrying paper documents (printout); as well as retrieving and updating patient medical data (electronic healthcare record system). The solution also includes e-booking and e-reporting.

The project took 6 months to implement as a partnership with Ericsson Croatia.

Additional benefits that accrued include:

● Organizational benefits, ie: allowing for a more efficient healthcare organization

● Higher-quality business processes in administration, procurement, human resources management, patient data management, accounting, billing, continuous performance monitoring and reporting, etc.

In order to stimulate the usage of e-health services, The Croatian Institute for Health Insurance and the Ministry of Health and Social Welfare pay a monthly amount to all doctors who decide to join the e-health system (i.e. get networked). The amount is intended to cover their costs regarding the telecom link, license/ program maintenance, purchase of defined computer equipment.

To implement the system from scratch needed a high degree of coordination between the Ministry of Health and Social Welfare, the Croatian Institute for Health Insurance, the Croatian National Institute of Public Health and Ericsson Nikola Tesla. Solution deployment was delayed by legal and regulatory issues and obstacles regarding the electronic communication, commerce and invoicing. E-signature Law had to be enforced. Current legislative issues include the "Rule Book" on prescribing and giving medications and the "Rule Book" defining the rights and entitlements in primary healthcare. Due to this, certain functionalities cannot be implemented yet.

Source : http://www.smart2020.org/case-studies/ehealth-croatia/

FORMER YUGOSLAV REPUBLIC OF MACEDONIA
E-INCLUSION: PROTECTION AND SAFETY OF CHILDREN AND THEIR RIGHTS ON THE INTERNET

The Former Yugoslav Republic of Macedonia has invested heavily in the construction of ICT infrastructure in primary and secondary schools, as well as the mass purchase of computer systems for classrooms and internet access.

The CRISP (Protection and safety of children and their rights on the Internet) project aims to protect the rights of children online and to provide reliable and secure access, protection of their privacy and the privacy and security of their families. The project has identified and emphasized the need to build the capacity of large groups of stakeholders in safety and protection of human rights on the Internet, based on international agreements on the rights of children, and in accordance with the relevant National laws. The regulatory Act (Draft Regulation on the law for minors addressing problems in relation to mental and moral development of minors) drafted on the basis of the Broadcasting Law was also taken into account for the planning of the project.

A network of 12 NGOs around the country under the impetus of Metamorphosis Foundation with the Directorate for Personal Data Protection worked together to raise awareness and build capacity in primary and secondary schools. The Ministry of Education and Science of The Former Yugoslav Republic of Macedonia and the Bureau of Education Development provided support for the project by providing permissions and facilitating access to public schools. Some municipalities, such as Veles and Kisela Voda (Skopje) provided additional support for the project by improving communication with local schools and local communities. Lectures and training for children, parents, teachers and the public in general were held with the help of specific educational resources prepared in Macedonian and Albanian.

The project included several phases:

● Creating resources (ICT guide, brochures, children's rights Charter on the Internet and web-site) in the local languages (Macedonian and Albanian) and forming a network of

NGOs working on protection of child rights. Printed resources proved crucial to inform the parents usually less familiar with internet than the children.

● Training and introduction of members of the NGO network on this particular issue (children's rights on the Internet) and qualification for the education of children, parents and teachers in primary and secondary schools around the country.

● Members of the NGO network that carried out training through specially prepared and organized presentations in primary and secondary schools as well as distribution of materials during presentations. Working as a network with a large number of institutions involved requires extensive planning up to the details yet allowing flexibility.

● Research and evaluation: basis and research on Internet use and perceptions of security and privacy of the target groups.

All resources are available in digital form on the website of the project, which has a version of Macedonian and Albanian language. The web site also presents updated news about child safety, declarations and reports on project activities.

The activities of the project covered 50 primary and 20 secondary schools in 12 towns and 7 villages in The Former Yugoslav Republic of Macedonia, with the participation of 8,482 students, 1,170 teachers and 1,138 parents. The website received over 9300 visits during the first 10 months of work.

The project was financed by the European Initiative for Democracy and Human Rights (EIDHR) and Metamorphosis.

Web site of the project:

English: www.crisp.org.mk (Protection and safety of children and their rights on the Internet)

Macedonian: www.bezbednonainternet.org.mk

Albanian: www.internetisigurt.org.mk (Safe Online)

MOLDOVA
BARCODE PRODUCT LABELLING

The medicinal, wine, bottled water and cigarette industries in Moldova have been the subject of an ICT driven labeling innovation aimed at reducing smuggling, tax fraud and illegal production that involves a unique barcode number attached to each product. For medicines, each packet or bottle sold in Moldova has a small label with a barcode number unique to that specific item. The bar code is unique to that specific package (not just to the produce type). 'Latent' content is also included that can be read only using special small readers that are widely distributed, as a means to authenticate the label. Pharmacies caught selling them without labels can lose their license and have a fine imposed.

The labels are attached to both home-produced and imported goods (except wines) in special warehouses, linked to a set of data on each individual product. Using the barcode number, the public can search for information on that specific item on a Website or using an SMS message and retrieve relatively detailed data, for instance the active ingredients in medicines, authenticity, date of production and expiration, and for wine, the year and location of production, the grape used, and whether chemicals were added. The system was designed and developed in Moldova to suit Moldovan circumstances i.e. combat forgeries and illegal imports (that avoid VAT), and illegal price rises. The proportion of the final retail price of all medicines imported to Moldova, accounted for by costs within the country, can be no higher than 40% of the total cost. i.e. the cost of the medicine 'at the border' paid for by the importer will always be at least 60% of the final retail price uses readily available technologies. The success of the system however, allowed Moldova to market it to other countries such as Uzbekistan, Kazakhstan and Azerbaijan with interest expressed elsewhere.

The benefits were immediate with a huge reduction in counterfeiting and illegal importation and a subsequent rise in taxes.

Table 1: Sales and VAT Medicines

Millions of Lei	2005	2006	2007	2008
Value of medicine sales	26.0	55.0	70.0	45.0

Table 1 shows the value of medicine sales more than doubling between 2005, when the system

8 The medicines website is here http://ceacm.amed.md/

was introduced, and 2006, caused by a major drop in illegal sales and a corresponding rise in the amount of VAT revenue generated. The economic downturn is credited with having caused a fall again in 2008, though to nowhere near the 2005 figures. It is estimated that black market sales fell from about 10% of all medicines in 2004 to 0.4% in 2008; and cases of counterfeit producers fell from ten in 2004 to zero in 2008. The cost of the labelling system is calculated to be less than ¤0.02 (two cent) per label.

MONTENEGRO
CENTRAL e-GOVERNMENT PORTAL

E-Government is an opportunity for state administration to be more efficient using information - communication technologies and systems, as well as to be more reliable in providing higher quality of services to end users (businesses, citizens, other government authorities, international institutions, etc.).

As a part of its activities and one of the most important goals, Ministry for Information Society and Telecommunications of Montenegro has recognized the building of fundamental systems and platforms for providing and improvement of electronic services, whose aim is, in cooperation with other institutions, to achieve the increase of number and quality of electronic services and to attract as many citizens to use this way of communication with the state.

E-Government portal is accessible over the Internet or over the network of state administration, with adequate portability on all web-oriented platforms. Portal was developed by using Microsoft solutions. NET platform has been a proven to be developed environment in numerous projects, both in Montenegro and neighboring countries.

Portal has an attractive design and strong visual identity of the national portal. Information and services are grouped to enhance usability, so that users can easily access the desired services. Portal supports two categories of users: anonymous users and registered users.

Each user, accessing to Portal can find the needed services, log to the system using an electronic certificate, complete the electronic form, sign it electronically, electronically pay all necessary fees and electronically submit them to the competent authority.

Within e-Participation section of the Portal, citizens can actively participate in the process of creation of laws and other strategic documents, as well as present their opinion and views through public hearing.

E-Government Portal has been officially launched on 07 April 2011, and it currently provides eighteen electronic services that are being provided by nine institutions.

ROMANIA
NATIONAL STRATEGY FOR IMPLEMENTATION OF UNIVERSAL SERVICE

Communications are now in Romania, as for most of countries of the world, a strategic sector of national economy. The development of infrastructure services recorded a notable success in Romania based on user access figures, against the backdrop of growing demand fueled by increasing purchasing power and increasingly sophisticated consumer preferences of Romanian users previously ill-served by the inadequate supply and quality of traditional fixed networks. By the end of 2008, no fewer than six mobile phone companies in Romania were providing their own infrastructure, supplying access to 33 operators to fixed telephone networks and over a thousand networks electronic communications were used for providing broadband Internet access.

In this context and taking into account the need for full alignment with the standards of universal service as set out in Directive 2002/22/EC, the Policy and Strategy document on the implementation of universal electronic communications services industry were adopted. The new strategy includes objectives and appropriate measures to be implemented by December 31, 2012 (http://www.mcti.ro/).

The two main lines of development are:

- ensuring access to isolated areas to the public telephone network communities via telecentres

- access services to ensure accessibility to the public telephone network at a fixed point for disadvantaged users,

The long-term objective is to provide access to public telephone network at fixed locations in each house. Between 2004 and 2008, the National Economy and Communications, ANCOM, organized seven tenders for the installation of telecentres in 633 localities in Rural areas without access to public access or telephone, seven operators were designated universal service providers, with residents required to provide telephony, fax and Internet access. Installation of

telecentres in remote locations was the first step towards reducing the existing information gap between urban and rural areas. Thus, Rural Communities Telecentres provide access to electronic communications services and outposts. Meanwhile, the establishment of telecentres helps to acquaint and educate consumers about electronic communications services leading and growing demand for such services in rural Areas.

Another short-term development action aimed at supporting certain disadvantaged populations to ensure accessibility for access to public telephone network at a fixed point. Thus, in 2004 and 2005 grants were awarded to pay subscriptions for fixed telephony services to over 500,000 low-income families.

SERBIA
ONLINE COURSE ON GENDER EQUALITY

The NGO "Equal Opportunities" was established with the goal of facilitating equal access for both women and men in using ICTs by establishing permanent mechanisms for bridging the digital divide and the gender divide such as:

- To facilitate equal access for both women and men in using modern (ICT).

- To bring awareness of gender digital divide and promote bridging the digital gap.

- To establish permanent mechanisms for bridging the digital divide and the gender divide, particularly in rural areas.

- To promote the inclusion of a gender perspective and coordination of the gender activities in ICT sector and in national ICT policies.

- To encourage the use of ICT in empowering women and their daily lives.

Indeed, the number of women that use ICT is still very small, as shown in many studies, and "Equal Opportunities" by its efforts to decrease that gap creates conditions for the involvement of women in the eEconomy, reduce poverty and improve quality of life of both families and society in general.

The NGO "Equal Opportunities" is registered in Belgrade as non-governmental and non-political organization. "Equal Opportunities" works on the basis of partnership with the Ministry for Education and Sport of Republic of Serbia, the Ministry for Science, Technology and Development, the Advanced School for EE and Advanced PTT School and also private companies including Ericsson, EUNET, PTT Serbia, Telekom Serbia a.d., Mobtel, Teri Engineering, Telegroup, CYPTT.

In June 2008, EO launched an online course on gender equality, funded by CIDA. There are four modules, and you complete them in your own time. At the end you can do a test and be awarded a certificate. About 3,000 registered to do it and just under 100 have already completed it, with many more completing individual modules. The final module is on how to mainstream

gender issues into a project, and this can be done on its own.

Contact:

jednake@e-jednakost.org.rs

tel: +381 638801409

tel: +381 64 1115955

UNMIK/KOSOVO
E-GOVERNANCE FOR MUNICIPALITIES

The importance of this project consists in enhancing citizens' involvement in decision-making and improving transparency, through the transformation of municipal services from a conventional into electronic form. It enables the exchange of municipal web pages from the electronic gazette into a robust intercommunity platform as well as the generation of timely online success indicators tracking the performance of the Municipal Assembly and Municipal Administration in relation to legal obligations and citizens.

The advantages are numerous such as an increase of the service quality, increase of the management efficacy, increase of trust between the citizen and the government, transformation of services for citizens with disabilities, increase of democracy by enhancing citizen participation during decision-making process and inter-municipal cooperation physically in the municipality; through the municipal webpage; and through mobile telephone.

● Services are provided closer to the citizen through the electronic manner of communication. The citizen may initiate the application by being present physically in the municipality; through the municipal webpage; through a mobile telephone with internet and very soon also through the 'info mats' - nine free of charge computers for access into the municipal electronic services.

● The application of the citizen is input directly into the software platform and, as it is processed by the appropriate directorates, its status is automatically posted to the internet and the response from the interested parties may be monitored

● Hardware equipment, server and other supportive infrastructural equipment have visibly increased the capacities for processing and preservation of the digital data. The capacity is increased by 17 times compared to before 2008.

● Human capacities building regarding the use of information technology: Training for 400 municipal officials with ECDL "European Computer Driving License" training.

● An electronic communication links citizen service offices with the ministerial and governmental portal.

● Directorates within the municipality have been unified, eliminating duplication and

enabling cross referring, through the Database of the Civil State.

● Municipal web pages have been unified into http://kk.rks-gov.net as electronic gazettes have been transformed into virtual municipalities, and the processes within municipalities have become measurable and easy managed.

● The CMS/CSC platform integrates various databases including: donor funding; creation of businesses; cadastral web services in the local level; archival writing and archival equipments. It is an open platform and it integrates all municipal web-services using Service Oriented Architecture (SOA).

Source: http://www.mapl-ks.org/

BEST
PRACTICE
COMPENDIUM
IN
IMPLEMENTING
THE e-SEE
AGENDA +
2011